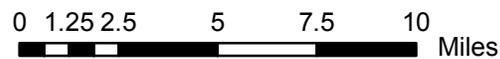
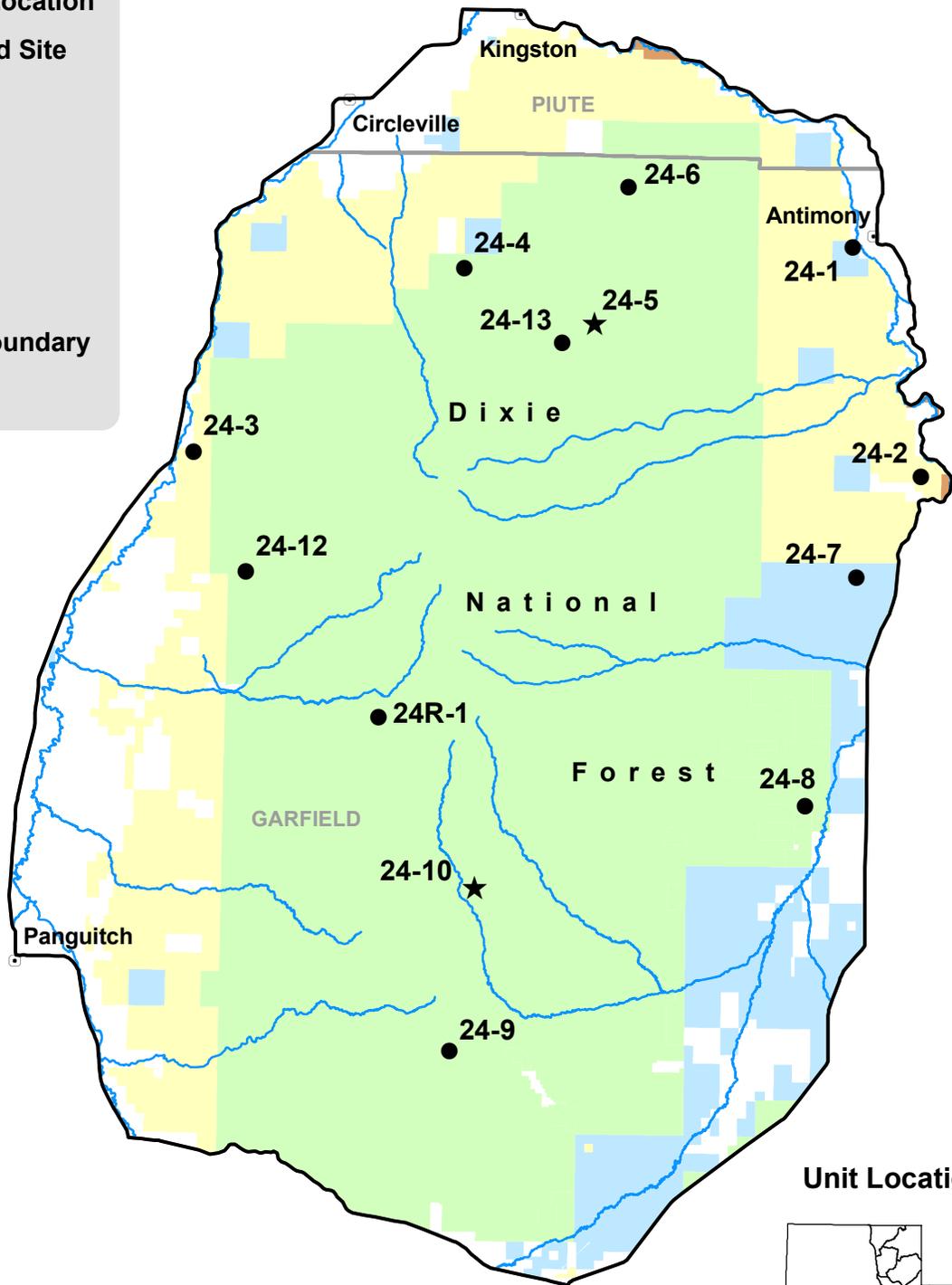
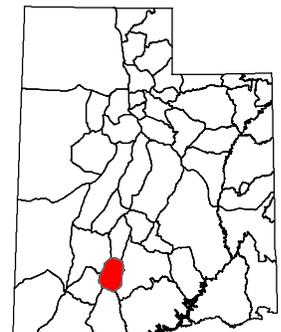


Management Unit 24

- Transect Location
- ★ Suspended Site
- BLM
- USFS
- UDWR
- SITLA
- Private
- County Boundary
- River



Unit Location



WILDLIFE MANAGEMENT UNIT 24 - MT. DUTTON

Boundary Description

Garfield and Piute Counties - Boundary begins at the junction of Highways US-89 and SR-62; then south on US-89 to Highway SR-12; then east on SR-12 to the Widtsoe-Antimony road; then north on this road to Highway SR-22; then north on SR-22 to SR-62; then west on SR-62 to US-89 and beginning point.

Herd Unit Description

The Dutton Unit is located at the southern end of one of several high plateaus in southern Utah that are the result of a long succession of volcanic activity which centered in the Tushar Mountains and extended south and east to create the Kolob, Sevier and Aquarius Plateaus. Table Mountain is an example of a lava capped plateau on the north end of the unit. Non-marine sedimentary rocks form the parent material for the soils at lower elevations on the southern and eastern portions of the unit. Mt. Dutton rises to an elevation of 11,036 feet near the center of the unit. The reader is directed to review the herd unit description given by Huff and Bowns (1965) for information on the major drainages, municipalities and the limits of normal and severe deer winter range. Huff and Bowns (1965) identified the vegetation composition of normal and severe deer winter range.

The 1998 deer and elk management plans estimate 131,752 acres of deer and 114,892 acres of elk summer range on the unit. The majority of the summer range for deer and elk is on land administered by the U. S. Forest Service, 94% and 99% respectively. Deer and elk winter range is estimated at 159,508 acres and 71,951 acres, with most being on Forest Service lands, 51% and 70%, respectively. BLM administered lands make up most of the remainder of deer and elk winter range.

Key Areas

Key winter range areas for deer were identified by the local interagency committee during the spring of 1987 and include the following areas: North Pole Canyon, Deer Creek Bench, North Bull Rush, Mud Springs, Cow Creek, and the Marshall Basin chaining. The elevation of these key areas range from 6,500 to 7,300 feet. Range types included in the monitoring effort are pinyon-juniper (chained and seeded), Wyoming big sagebrush, and black sagebrush.

Key areas for elk during the winter and summer periods were also identified by the local interagency committee and include: Suicide Pasture, Table Mountain, Cow Creek, Mud Spring Ridge, Barnhurst Ridge, and Prospect Pasture. These sites range in elevation from 7,200 feet for winter range in Cow Creek to 9,600 feet for summer range in Suicide. The range types included in the monitoring effort are mixed alpine, black sagebrush, and mixed mountain brush.

Study Site Description

A total of 11 trend study sites were established on the unit in 1987. Most of these sites were reread in 1991, 1997, 2003, and 2008. Two additional studies were established on the unit following 1987. One study was established in 1998 to sample a prescribed burn on a conifer/aspen vegetation type on the right fork of Sanford Canyon. The other study was established near the Jones Correl enclosure in 2003 to monitor an area heavily used by elk and livestock and to replace the suspended Suicide trend study. Study sites monitor important winter, spring/winter, and summer range for elk and deer. A site description for each site follows along with data tables and a discussion of trends taking place.

SUMMARY

WILDLIFE MANAGEMENT UNIT 24 - MT. DUTTON

Community Types

Eleven trend studies were sampled in 2008. Four studies sampled Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) communities (24-1, 24-3, 24-7, and 24-8), two studies sampled black sagebrush (*Artemisia nova*) communities (24-2 and 24-9), two studies sampled pinyon-juniper communities that had been chained and seeded (24-4 and 24-12), and three studies sampled big game summer range (24-6, 24-13, and 24R-1) the latter of which had a prescribed burn in 2002.

Precipitation

Vegetation trends are dependent upon annual and seasonal precipitation patterns. Precipitation data from this herd unit were compiled from the Angle, Panguitch, Bryce Canyon National Park, and Circleville weather stations.

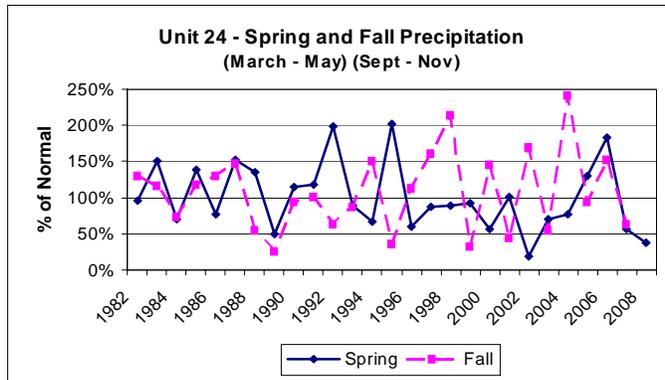


Figure 2. Average spring and fall precipitation for unit 24. Precipitation data were collected at the Angle Panguitch, Bryce Canyon National Park, and Circleville weather stations (Utah Climate Summaries 2008).

Browse

The average browse trend remained fairly constant from 1985 to 2008 (Figure 3). Mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) was sampled at the Mud Springs Chaining (24-4), Mud Spring (24-9), and Jones Corral (24-12). Its average density stayed fairly constant, but increased slightly from 1997 to 2008 (Figure 4). Average mountain big sagebrush cover also stayed relatively constant from 1997 to 2008 (Figure 5). Average mountain big sagebrush population decadence increased dramatically from 14% in 1997 to 49% in 2003, but decreased again to 11% by 2008 (Figure 6).

Wyoming big sagebrush was sampled at North Pole Canyon (24-1), North Bull Rush (24-3), Cow Creek

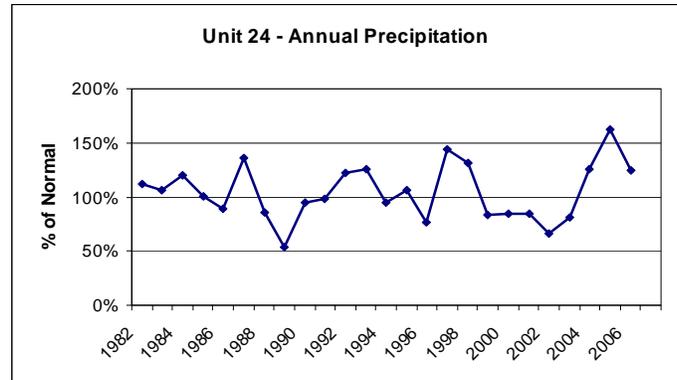


Figure 1. Average annual precipitation for unit 24. Precipitation data were collected at the Angle, Panguitch, Bryce Canyon National Park, and Circleville weather stations (Utah Climate Summaries 2008).

weather stations (Figures 1 and 2). The unit annual precipitation average below 75% of normal (drought conditions) in 2002, and only 54% in 1989 (Figure 1). Spring precipitation (March to May) was below 75% of normal in 1984, 1994, 1996, 2000, and 2006-2007, and near or below 50% of normal in 1989, 2002, and 2008 (Figure 2). Fall precipitation (Sept. to Nov.) was below 75% of normal in 1984, 1988, 1992, 2003, and 2007, and near or below 50% of normal in 1989, 1995, 1999, and 2001 (Figure 2). Spring precipitation is essential for the recruitment of browse seedlings and the establishment of native perennial grasses and forbs. Fall precipitation, however, benefits winter annual species, such as cheatgrass (*Bromus tectorum*) (Monsen 1994).

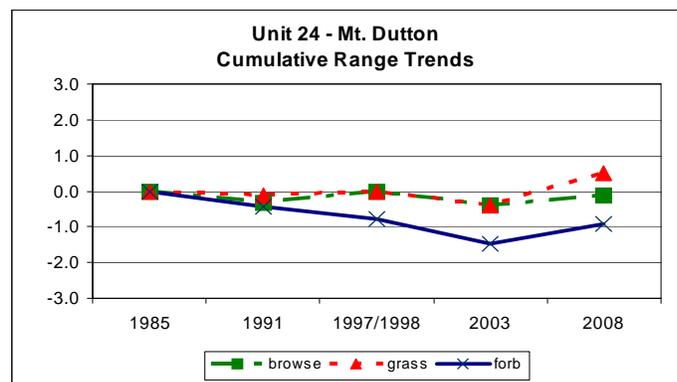


Figure 3. Cumulative range trends for unit 24, Mt. Dutton.

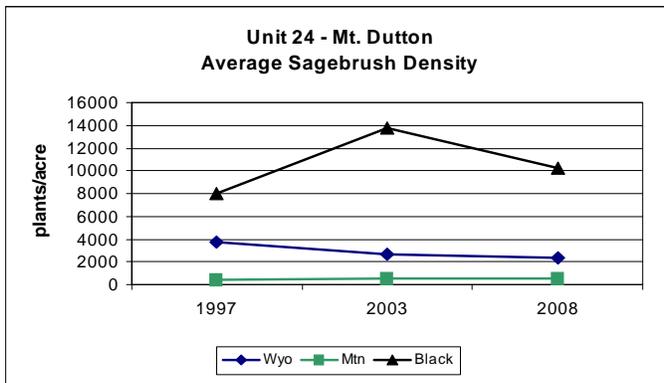


Figure 4. Average Wyoming big, mountain big, and black sagebrush density for unit 24.

The population decadence increased slightly from 16% in 1997 to 19% in 2003, then increased more dramatically to 35% in 2008 (Figure 6).

Grass

The average grass trend was relatively stable with slight increases and decreases from 1985 to 2003, and then increased more substantially in 2008 (Figure 3). Average perennial grass nested frequency increased 26% from 1997 to 2008 (Figure 7). Most of that increase came from 2003 to 2008. Average perennial grass cover increased steadily from 11% in 1997, to approximately 13% in 2003, and to 17% in 2008 (Figure 8). Cheatgrass was not a significant component of any of the studies sampled in this herd unit.

Forbs

The average forb trend decreased steadily from 1985 to 2003, then increased slightly in 2008 (Figure 3). Average perennial forb nested frequency increased 29% from 1997 to 2003, and increased a further 91% in 2008 (Figure 7). Average perennial forb cover increased from under 3% in 1997 to over 3% in 2003, and 5% in 2008 (Figure 8). No noxious weeds were sampled on the studies in this herd unit.

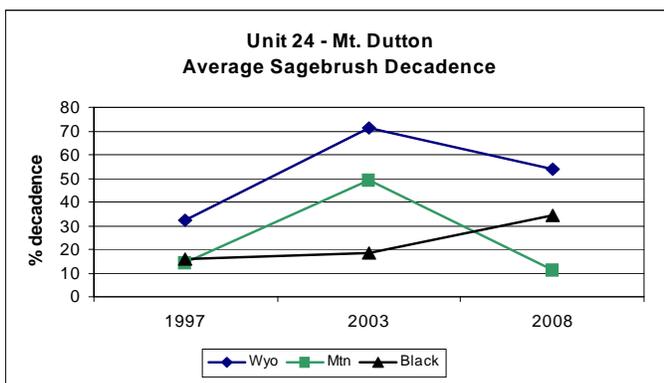


Figure 6. Average Wyoming big, mountain big, and black sagebrush decadence for unit 24.

(24-7), and Prospect Seeding (24-8). Its average density decreased by 35% from 1997 to 2008 (Figure 4). Average Wyoming big sagebrush cover decreased, as well, from over 7% in 1997, to 6% in 2003, and to 5% in 2008 (Figure 5). Its population decadence increased from 32% in 1997, to 71% in 2003, and decreased to 54% in 2008 (Figure 6). Black sagebrush was sampled on Deer Creek Bench (24-2) and Mud Spring (24-9). The average density of black sagebrush increased 73% from 1997 to 2003, and decreased by 26% in 2008 (Figure 4). The average black sagebrush cover followed the same trend and increased from 14% in 1997 to 19% in 2003, then decreased to 15% in 2008 (Figure 5).

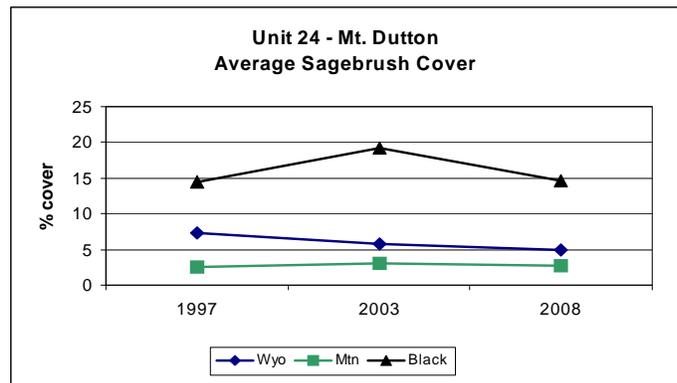


Figure 5. Average Wyoming big, mountain big, and black sagebrush cover for unit 24.

Desirable Components Index

Six studies in this herd unit are considered within the low potential scale for the Desirable Components Index (DCI): North Pole Canyon (24-1), Deer Creek Bench (24-2), North Bull Rush (24-3), Cow Creek (24-7), Prospect Seeding (24-8), and Mud Spring (24-9). The average DCI rating for these studies was good in 1997, fair in 2003, and good-fair in 2008 (Figure 9). The two remaining winter range studies, Mud Springs Chaining (24-6) and Marshall Basin (24-12), are within the mid-level potential scale. The average DCI rating for these studies decreased from poor in 1997 to very poor in 2003 and 2008 (Figure 9).

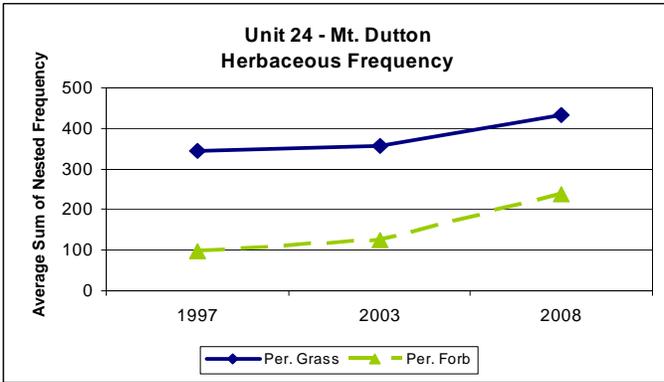


Figure 7. Average herbaceous nested frequency for unit 24.

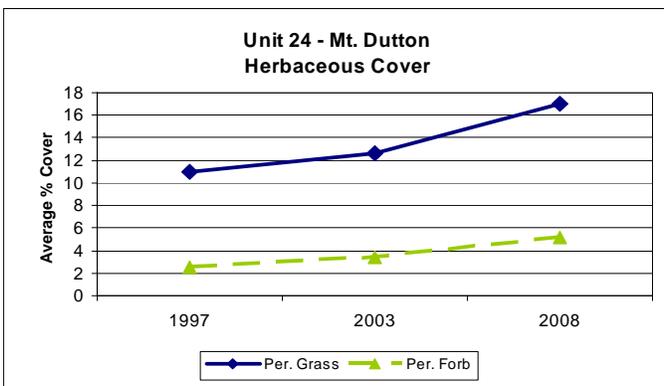


Figure 8. Average herbaceous cover for unit 24.

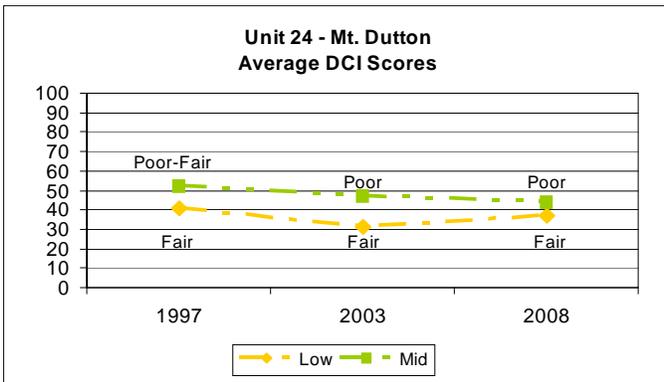


Figure 9. Unit 24 Desirable Components Index (DCI) scores by year. The DCI scores are divided into three categories based on ecological potential, which are low, mid-level, and high. No high potential sites are sampled in this unit.